

Work Order ID 78680 .

\*78680\*

Page 1

January-12-12 10:55:05 AM

Item ID: D206-642-641

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: Replacement Skidtube

Stop \*NS2\*

Start Date: 12/01/2012 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 10/02/2012 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: M.C.J

Date: 12/01/12 Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3288	Rev G								

100

0.00

\*100\*

DC

Document Control

Memo

0.00

Photocopy bluefile and create labels per PPP D206-642-641  
CHG003

Scalco 07

HJ for M.C.J. 12-6-12

78680

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Work Order ID 78680

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Page 2

January-12-12 10:55:05 AM

Item ID: D206-642-641

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Skidtube

Start Date: 12/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 10/02/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

110

0.00

**\*110\***

Skidtubes

Skidtubes

Memo

0.00

1-Deburr FWD edge of tube, grind bending marks.

2-Remove ridge on inside of fwd edge of tube as per Dwg D3288

3-Weld Fwd Cap as per Dwg D3288. Grind to obtain proper fit  
A/R AL ROD Batch: 120164

4-Grind welds flush to cap on top surface only.

5-Cut Aft end as per Dwg D3288 from front of tube then deburr

6-Remove inner indexing ridge on aft end as per Dwg d3288

7-Open holes for aft cap as per Dwg D3288 using Dt8025

8-Drill pilot holes using DT8818

9- open float holes section J-J (6 per side) to 0.297" and aft cap holes to 0.208"

10-Insert D3286-1 doubler using DT8732 & DT8879, then locating doubler off the 3/16" holes cleco D3286-1 doubler remove DT8879

11-Working from center out, drill #30 holes into D3286-1 Doubler. cleco each hole after its drilled. Verify angle of holes to accomodate rivet heads.

12-Install DT8879 to hold doubler. Remove DT8732 then cleco doubler with #30 clecos. Remove DT8879 open GHW to 0.500"

~~12-2-17 BB 12/02/21~~

12-02-21  
3 BE 12-02-17

CF 12-2-22

SAD 12-04-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: ~~2250-642641~~ PAR #: \_\_\_\_\_ Fault Category: ~~Skipped~~ Skipped NCR: ~~Yes~~ No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: Scrap Disposition: Scrap QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<del>2/13/11</del>	<del>10.5</del>	<del>employee cut tube too short measuring</del> <del>and should be</del>						

NOTE: Date & initial all entries

**\*78680\***

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**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 12/01/2012    **Start Qty:** 1.00    **\*1\***

**Cust Item ID:**

**Required Date:** 10/02/2012      **Req'd Qty:** 1.00      **\* 1 \***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

**Insp.  
Stamp**

13-Remove D3286-1 doubler,identify orientation,deburr then attach to W/O

14-Remove indexing edge as per Dwg D3288.

15-C'sink rivet holes as per Dwg D3288.

120

QC5- Inspect part completeness to step on W/O	0.00
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**\*120\***

QC

## Quality Control

## Memo

0.00

130

Chemical Conversion Coat per QSI005 4.1

**\*130\***

HandFinish

## Hand Finishing

## Memo

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng/ Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Work Order ID 78680

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January 12-12 10:55:05 AM

Item ID: D206-642-641 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Replacement Skidtube  
 Start Date: 12/01/2012 Start Qty: 1.00 \*1\* Cust Item ID:  
 Required Date: 10/02/2012 Req'd Qty: 1.00 \*1\* Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QC3- Inspect Part Finish	0.00				1	0	BE 12/04/19	
*140*									
QC	Memo	0.00							
Quality Control									
150		0.00							
*150*									
Skid tubes	Memo	0.00							
Skid tubes	1-Open Holes to finished size as per DWg D3288. Debur. ✓								
	2-Locate, install and rivet doublers using DT8879 as per Dwg D3288. Micro-shave rivets as required. ✓								
	3-Bond web in place as per Dwg D3288 & QSI 015. A/RSikaflex-291 7121221								
	Sikaflex expire date: 12-01-04								
	Start: 12-04-20 Time: 1100								
	Finish: 2-05-23 Time: 7:00								
	(Adhere for 12 hours)								

① SMO 12-04-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**Work Order ID 78680****\*78680\***

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January-12-12 10:55:05 AM

Item ID: D206-642-641

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Item Name: Replacement Skidtube

Stop **\*NS2\***

Start Date: 12/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 10/02/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC5- Inspect part completeness to step on W/O	0.00							
<b>*160*</b>									
QC	Memo	0.00							
Quality Control									
170		0.00							
<b>*170*</b>									
CNC Bend 1	Memo	0.00							
CNC Delta 100 Bender	Bend tube using program D3288 as per Dwg D3288. Install drop pins in cross bolt spacer holes to maintain web position.								

DP 12-5-17

DL 12/05/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No **DQA:** \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 78680

January-12-12 10:55:05 AM

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Item ID: D206-642-641

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Replacement Skidtube

Stop **\*NS2\***

Start Date: 12/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 10/02/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180		0.00							
<b>*180*</b>									
Skidtubes	<b>Memo</b>	0.00				<u>1</u>	<u>2</u>	<u>B/E</u>	<u>12/05/23</u>
Skidtubes	1-Drill pilot holes for wearplates using D3288-T2 as per Dwg D3288, then open to Ø0.297". (without cutting fluid) DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)  2-C'sink X-bolt holes.  3-Deburr and remove alodine as required for welding								

1 0 BE 12/05/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 78680

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January-12-12 10:55:05 AM

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Item ID: D206-642-641

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: Replacement Skidtube

Stop \*NS2\*

Start Date: 12/01/2012 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 10/02/2012 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190		0.00							
*190*									
Skidtubes									
Skidtubes	<p>Memo</p> <p>1-Insert D2649 &amp; D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3288. Remember to back drill each hole before welding the other side. Use aluminum rod. A/RAluminum Rod <u>M120164</u></p> <p>2-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3288. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required A/RSS Rod <u>NONE</u></p> <p>3-Grind cross bolt welds flush as per Dwg D3288. Masking Tape access to inside of the skidtube</p> <p>4-Counterbore 5/16" x 0.750" deep using DT8747, except 8th cross bolt hole from Aft end, as per Dwg D3288.</p>	0.00							

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

0010

812/12/24

-> CF 12-5-23

DP 12-5-23

1 0 8612/05/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 78680

**\*78680\***

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January-12-12 10:55:05 AM

Item ID: D206-642-641

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Item Name: Replacement Skidtube

Stop

**\*NS2\***

Start Date: 12/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 10/02/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

210

QC9- Inspect visual per QSI004- Fusion Welds

0.00

**\*210\***

QC

Memo

0.00

Quality Control

1x ~~0~~ 12-05-23

220

0.00

**\*220\***

HandFinish

Memo

0.00

Hand Finishing

1 76 12-5-29

230

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

**\*230\***

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

9:30  
320°F  
10:00

1x ~~0~~ 12/05/30

M12134

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



# Work Order ID 78680

**\*78680\***

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January-12-12 10:55:05 AM

Item ID: D206-642-641

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Item Name: Replacement Skidtube

Stop

**\*NS2\***

Start Date: 12/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 10/02/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

240

QC3- Inspect Part Finish

0.00

**\*240\***

QC

Memo

0.00

Quality Control

1x d JH 11/01/31

250

0.00

**\*250\***

HandFinish

Memo

0.00

Hand Finishing

1-Install D3415-041 Nut Plate as per Dwg D3288 ,Install with LPS-3  
A/R LPS-3 Batch: 114596

2-Install inserts Dwg D3288. Use a drop of Sikaflex inside insert holes  
A/RSikaflex-291 121221  
Sikaflex expire date: 13/01

1 x 28 12/05/31

260

QC5- Inspect part completeness to step on W/O

0.00

**\*260\***

QC

Memo

0.00

Quality Control

5 12/05/31

28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**\*78680\***

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**\*N900040100\***

Setup Start \*NS1\*

Stop **\*NS2\***

**Start Date:** 12/01/2012    **Start Qty:** 1.00    **\*1\***

**Required Date:** 10/02/2012      **Req'd Qty:** 1.00      **\* 1 \***

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

**Insp.  
Stamp**

0.00

**\*270\***

HandFinish

## Memo

0.00

## Hand Finishing

1-Install wearshoes/wearpads & Gaskets as per Dwg D3288.

2-Install Ring on Nut Plate as per detail F & Dwg D3288.

3-Spray inside tube with LPS-3 on both sides of web

4-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/RSikaflex-291 12\ 22\

Sikaflex expire date: 13/01

5-Coat all exposed fastners with LPS Procyon,remove any exess on powder coat with MEK Degreasser.

A/R LPS Procyon Batch: 114596

QC5- Inspect part completeness to step on W/O

0.00,

**\*280\***

QC

## Memo

0.00

## Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 78680

**\*78680\***

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January-12-12 10:55:05 AM

Item ID: D206-642-641

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Replacement Skidtube

Stop **\*NS2\***

Start Date: 12/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 10/02/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***  
Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
290		0.00							
<b>*290*</b>									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D206-642-641								
	Location: _____								
	PPP Rev: <u>C.</u>								
300	QC21- Final Inspection - Work Order Release	0.00							
<b>*300*</b>									
QC	Memo	0.00							
Quality Control									

*/X*

*SP*  
*12-6-7*

*12/6/11*

*ME*  
*12-06-08*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

January-12-12 10:55:09 AM

**\*78680\***

**\*D206-642-641\***

**Required Date:** 10/02/2012

**Required Qty: 1.00**

IPP Rev:B05.11.15Added washers for aft cap, wearshoes and ringEC

IPP Rev:C 06-05-31 Revised steps JLM

IPP Rev:D 07-02-22 Added SS Wearplates & Gaskets JLM

IPP Rev:E 07-12-06 ECN 1080p DD verified by:ec

IPP Rev:F 08-04-17 as per PAR 08-015 DD verified by:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2620		Manufactured	No			110	Each	18.0000	1	1			
<b>*D2620*</b>									<b>**</b>				
Skidtube, 206 Skidtube													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				18					
				71616				1					
				71617				6					
				75587				2					
				76815				1					
				76817				5					
				76819				3					
D2647		Manufactured	No			110	Each	158.0000	1	1			
<b>*D2647*</b>									<b>**</b>				
Cap													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG002				158					
				73826				49					
				75482				109					

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

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Page 2

Work Order ID: 78680

**\*78680\***

Parent Item: D206-642-641

**\*D206-642-641\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 10/02/2012

Start Qty: 1.00

Required Qty: 1.00

D3286-1

Manufactured No

110

Each

126.0000

2

2

**\*D3286-1\***

Doubler

\*\*

SAD 12-04-19

Location

Loc Qty

Loc Code

LG002

128

74872

6

75484

4

ST046

-2

76772

116

B89656

(2)

CR3212-4-04

Purchased No

150

Each

11,453.00

52

52

**\*CR3212-4-04\***

Cherry Rivet

\*\*

SAD 12-04-20

Location

Loc Qty

Loc Code

ST331

1463

116471

78

117816

3

118686

1

118840

16

119017

1355

119075

10

st510

9990

52

119075

9990

D3289-041

Manufactured No

150

Each

0.0000

1

1

**\*D3289-041\***

Float Web (206A/B)

\*\*

SAD 12-04-20

B82652

(1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 3

Work Order ID: 78680

**\*78680\***

Parent Item: D206-642-641

**\*D206-642-641\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 10/02/2012

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

190

Each

580.0000

9

9

**\*D2649\***

Cross Bolt Spacer

**\*\***

*BE 12-05-24*

*B 79503 x 9*

Location

Loc Qty

Loc Code

LG

400

77574

400

LG001

180

65317

1

68224

2

68507

11

71355

2

72704

2

72841

11

73390

8

73857

21

73858

53

73859

4

73860

4

76793

61

D3275-1

Manufactured No

190

Each

276.0000

6

6

**\*D3275-1\***

Crossbolt Spacer

**\*\***

*BE 12-05-24*

*B 83264 x 6*

Location

Loc Qty

Loc Code

LG002

276

66930

106

73393

118

74437

52

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 4

Work Order ID: 78680

\*78680\*

Parent Item: D206-642-641

\*D206-642-641\*

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 10/02/2012

Start Qty: 1.00

Required Qty: 1.00

D3286-3

Manufactured No

190

Each

170.0000

2

2

\*D3286-3\*

Spacer

\*\*

879557 \*2  
12/05/23

Location

Loc Qty

Loc Code

LG

100

78015

100

LG001

70

74117

1

76773

69

D3415-041

Manufactured No

250

Each

29.0000

1

1

\*D3415-041\*

Nut Plate

\*\*

1 (DP) 12/05/31

Location

Loc Qty

Loc Code

ST042

29

67605

29

CCR264SS3-3

Purchased No

250

Each

933.0000

2

2

\*CCR264SS3-3\*

Cherry Rivet

\*\*

2 (DP) 12/05/31

Location

Loc Qty

Loc Code

ST331

933

113973

2

117849 ✓

139

119017

792

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Work Order ID: 78680

\*78680\*

Parent Item: D206-642-641

\*D206-642-641\*

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 10/02/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-03

Purchased

No

250

Each

1,702.000

2

2

\*CR3212-4-03\*

Cherry Rivet

\*\*

2

DP

12/05/31

## Location

## Loc Qty

## Loc Code

FP002

712

114859 ✓

712

ST331

990

110139

2

119017

988

ALS7-1032-130

Purchased

No

250

Each

2,472.000

64

64

\*ALS7-1032-130\*

Insert

\*\*

64

DP

12/05/31

## Location

## Loc Qty

## Loc Code

ST280

328

121269 ✓

117717

27

118966

22

119775

279

ST281

71

119794

71

ST282

2073

119530

73

120181

2000

D3535-15

Manufactured

No

270

Each

21.0000

1

1

\*D3535-15\*

Wearshoe

\*\*

1

DP

12/05/31

## Location

## Loc Qty

## Loc Code

FP001

21

81354 ✓

73315

9

74512

12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

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Page 6

Work Order ID: 78680

\*78680\*

Parent Item: D206-642-641

\*D206-642-641\*

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 10/02/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-21

Manufactured No

270

Each

7.0000

1

1

\*D3535-21\*

Wearshoe

\*\*

1 (DP) 12/05/31

Location

Loc Qty

Loc Code

FP001

78987 ✓

7

70380

7

D3535-35

Manufactured No

270

Each

21.0000

1

1

\*D3535-35\*

Wearshoe

\*\*

1 (DP) 12/05/31

Location

Loc Qty

Loc Code

FP001

83638 ✓

21

67598

1

70815

1

73311

7

74509

12

D3535-41

Manufactured No

270

Each

13.0000

1

1

\*D3535-41\*

Wearshoe

\*\*

1 (DP) 12/05/31

Location

Loc Qty

Loc Code

FP001

42256 ✓

13

13

D3536-15

Manufactured No

270

Each

23.0000

1

1

\*D3536-15\*

Gasket

\*\*

1 (DP) 12/05/31

Location

Loc Qty

Loc Code

FP002

73318 ✓

23

23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 7

Work Order ID: 78680

\*78680\*

Parent Item: D206-642-641

\*D206-642-641\*

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 10/02/2012

Start Qty: 1.00

Required Qty: 1.00

D3536-21

Manufactured No

270

Each

5.0000

1

1

\*D3536-21\*

Gasket

\*\*

1 (20) 12/05/31

Location

Loc Qty

Loc Code

FP002

83433 ✓

5

70464

5

D3536-35

Manufactured No

270

Each

32.0000

1

1

\*D3536-35\*

Gasket

\*\*

1 (20) 12/05/31

Location

Loc Qty

Loc Code

FP002

81340 ✓

32

73313

14

74511

18

D3536-41

Manufactured No

270

Each

15.0000

1

1

\*D3536-41\*

Gasket

\*\*

1 (20) 12/05/31

Location

Loc Qty

Loc Code

FP002

37353

15

51646 ✓

3

51646

12

D3537-1

Manufactured No

270

Each

50.0000

7

7

\*D3537-1\*

Wearpad

\*\*

7 (20) 12/05/31

Location

Loc Qty

Loc Code

FP002

81360 ✓

50

69817

5

77036

45

84091 ✓

2

5

January-12-12 10:55:10 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 8

Work Order ID: 78680

\*78680\*

Parent Item: D206-642-641

\*D206-642-641\*

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 10/02/2012

Start Qty: 1.00

Required Qty: 1.00

D3537-3

Manufactured No

270

Each

12.0000

1

1

\*D3537-3\*

Wearpad

\*\*

1 (2P) 12/05/31

Location

Loc Qty

Loc Code

FP002

81363  
76986

12

12

AN3C4A

Purchased

No

270

Each

3,002.000

66

66

\*AN3C4A\*

BOLT

\*\*

66 (2P) 12/05/31

Location

Loc Qty

Loc Code

ST350

12556✓

3002

117313

2

117688

5

117872

10

118112

16

118451

2

118838

13

119749

954

120187

2000

NAS1515H3L

Purchased

No

270

Each

171.0000

2

2

\*NAS1515H3I \*

WASHER

\*\*

2 (2P) 12/05/31

Location

Loc Qty

Loc Code

FG

12556✓  
102472

40

40

ST277

131

118686

3

119438

28

120072

100

January-12-12 10:55:10 AM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 9

Work Order ID: 78680

**\*78680\***

Parent Item: D206-642-641

**\*D206-642-641\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 10/02/2012

Start Qty: 1.00

Required Qty: 1.00

AN960C10L

~~NR~~ NAS1149C0332 ✓

Purchased

No

270

Each

0.0000

78

78

**\*AN960C10I \***

washer

121509 ✓

\*\*

78

DP

12/05/31

D3683-1

Manufactured

No

270

Each

8,675.000

12

12

**\*D3683-1\***

Insert

\*\*

12

DP

12/05/31

Location

Loc Qty

Loc Code

FP002

8675

36319 ✓

8675

D3413-1

Manufactured

No

270

Each

59.0000

1

1

**\*D3413-1\***

Ring

\*\*

1

DP

12/05/31

Location

Loc Qty

Loc Code

ST420

2

83307 ✓

66387

1

70773

1

ST464

55

73822

3

75478

52

ST473

2

71041

2

AN4C5A

Purchased

No

270

Each

399.0000

1

1

**\*AN4C5A\***

BOLT

\*\*

1

DP

12/05/31

Location

Loc Qty

Loc Code

FP002

19

112243 ✓

19

ST355

380

112243

280

119017

100

January-12-12 10:55:10 AM

Shop Packet Print

Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries








Qty -041	Part Number	Description
X	D3288-041	SKIDTUBE ASSEMBLY
1	D2600-1-240	EXTRUSION
1	D2646	AFT CAP
1	D2647	CAP
9	D2649	CROSS BOLT SPACER
6	D3275-1	CROSS BOLT SPACER
2	D3286-1	DOUBLER
2	D3286-3	SPACER
1	D3289-041	FLOAT WEB
1	D3413-1	RING
1	D3415-041	NUT PLATE
1	D3535-15	WEARSHOE
1	D3535-21	WEARSHOE
1	D3535-35	WEARSHOE
1	D3535-41	WEARSHOE
1	D3536-15	GASKET
1	D3536-21	GASKET
1	D3536-35	GASKET
1	D3536-41	GASKET
7	D3537-1	WEARPAD
1	D3537-3	WEARPAD
12	D3683-1	INSERT
64	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
66	AN3C4A	BOLT
1	AN4C5A	BOLT
1	AN960C416	WASHER
78	AN960C10L	WASHER
2	CCR264SS3-3	RIVET
2	CR3212-4-03	RIVET
52	CR3212-4-04	RIVET
12	MS27039C1-05	SCREW (or AN3C3A BOLT)
2	NAS1515H3L	WASHER

#### GENERAL NOTES:

1. MATERIAL: N/A
2. FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1  
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
3. TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4. UNITS: INCHES UNLESS OTHERWISE NOTED
5. BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6. IDENTIFICATION: NONE
7. WEIGHT: 20.8 LBS
8. DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
9. BOND D3289-041 FLOAT WEB INTO D3288-1 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP
10. ALL HOLES DRILLED ON CENTERLINES EXCEPT WHERE SHOWN
11. DRILL Ø0.297 HOLES FOR D3683-1 INSERTS BEFORE FINISH. INSTALL D3683-1 INSERTS AFTER FINISH
12. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3288-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/291
13. WELDING: PER DART QSI 004
14. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

786.86 M.C.J  
12/01/12

RELEASED  
9/10/12

G	REFORMAT DWG. RMV LPS-3 (ZN B6-3) RMV C'BORE & ADD SECTION K-K (ZN C2-4)	CP	09.06.17
F	SUBSTITUTE FLOAT BAG INSERT W/SPEC CTRL DWG WAS ALS7-1032-130; IS NOW D3683-1	DC	07.11.21
E	MID-FLOAT HOLES WERE MOVED 2.00" FWD AND ROTATED INBOARD AND OUTBOARD BY 17" INSERTS ARE NOW INSTALLED AT THESE LOCATIONS	MB	07.09.14
D	DIMENSIONS ADDED	DC	07.06.04
C	NEW INSERTS, SS WEARSHOES AND GASKETS	PH	06.12.19
B	CHANGE INSERTS	CP	05.03.18
A	NEW ISSUE	CP	04.05.17
REV.	DESCRIPTION	BY	DATE
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.06.17	DRAWING NO. REV. G	
		D3288 SHEET 1 OF 4	
		TITLE SCALE	
		SKIDTUBE ASSEMBLY NTS	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

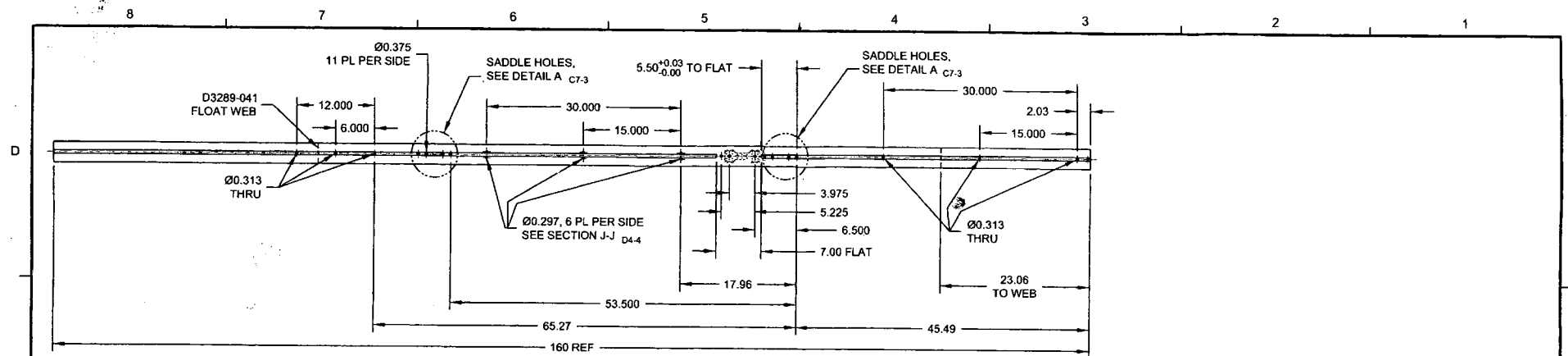
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

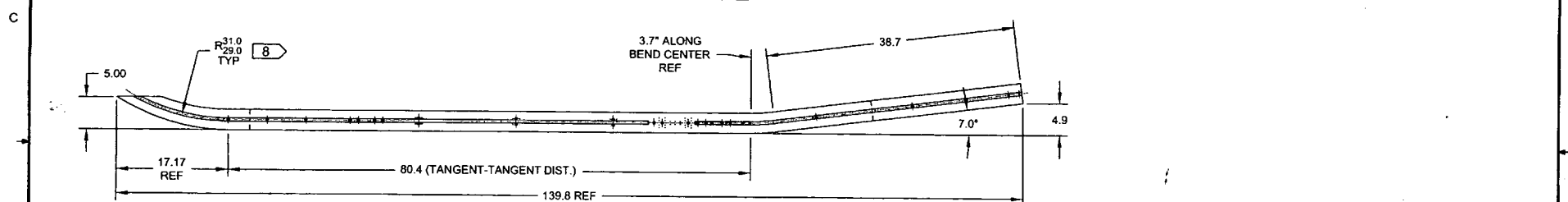
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

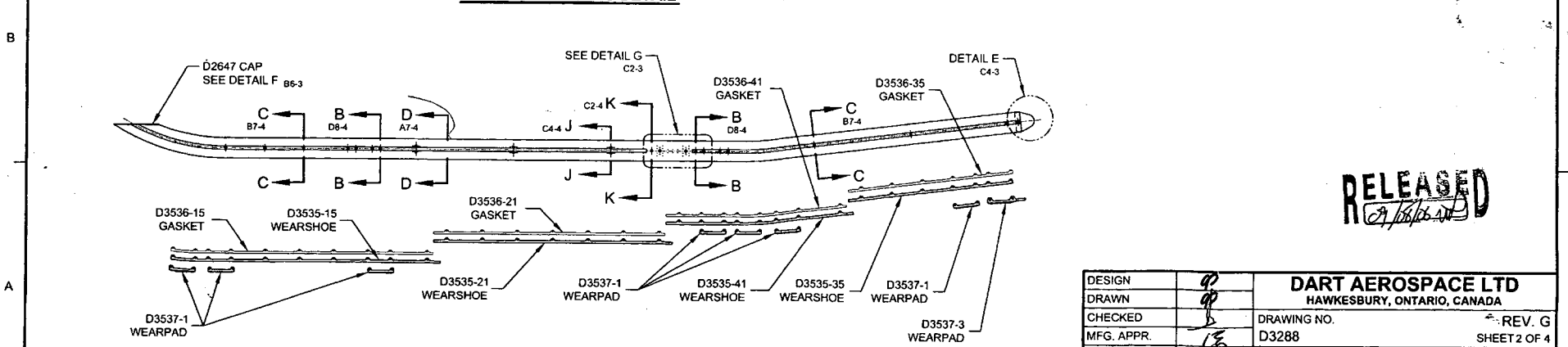
78680



**D3288-041 DRILLING/WEB ASSEMBLY DETAIL**



**D3288-041 BENDING DETAIL**



**D3288-041 WELDING DETAIL/SKIDTUBE ASSEMBLY**

**RELEASED**  
29/10/2004

DESIGN	9	<b>DART AEROSPACE LTD</b>	
DRAWN	9	HAWKESBURY, ONTARIO, CANADA	
CHECKED	13	DRAWING NO.	REV. G
MFG. APPR.	AN	D3288	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE ASSEMBLY	NTS
DATE	09.06.17	<small>COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

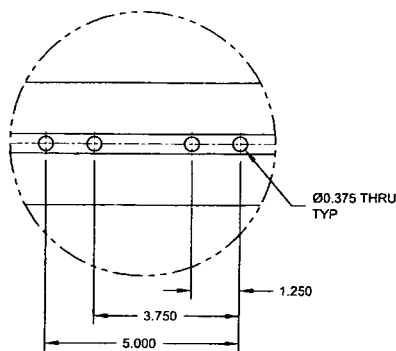
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

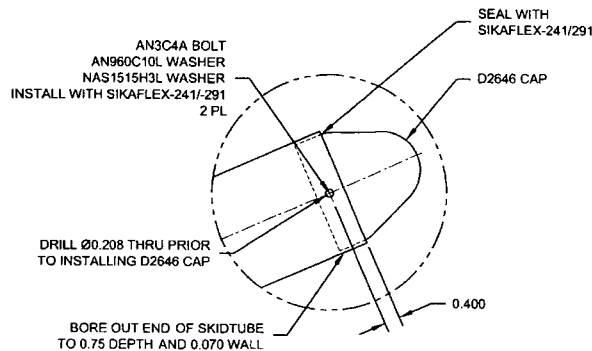
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

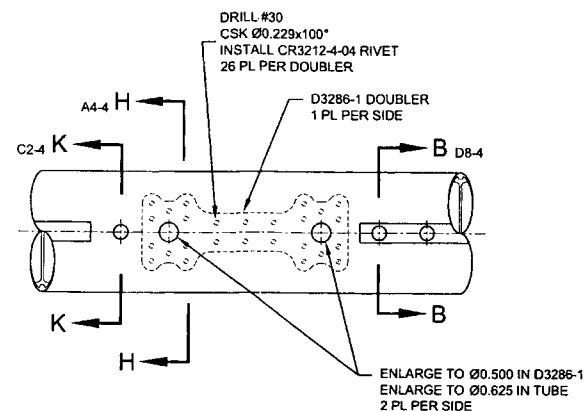
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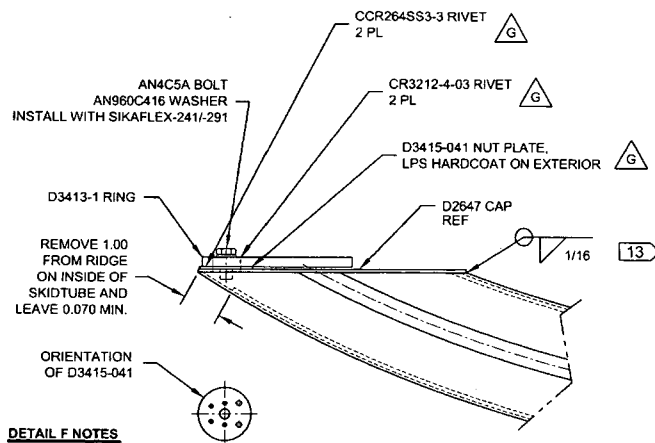
**DETAIL A: DRILL DETAIL** D6-2, D4-2  
SADDLE HOLES, SCALE 5X



**DETAIL E** B3-2  
SCALE 5X



**DETAIL G** B5-2  
SCALE 5X



- DETAIL F NOTES**
1. CUT TUBE LEVEL
  2. REMOVE RIDGE ON FWD SIDE
  3. LOCATE D2647 (TRIM AS NECESSARY)
  4. WELD D2647 IN PLACE PER DART QSI 004
  5. GRIND FLUSH
  6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041 PRIOR TO FINISH

**DETAIL F: END FINISHING DETAIL** B7-2  
SCALE 5X

**RELEASED**  
09/06/17

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MFG. APPR.		D3288	SHEET 3 OF 4
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

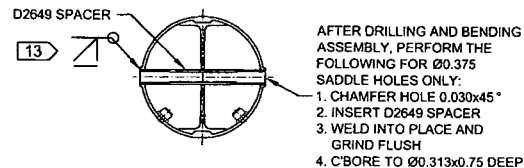
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

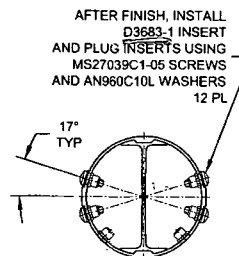
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

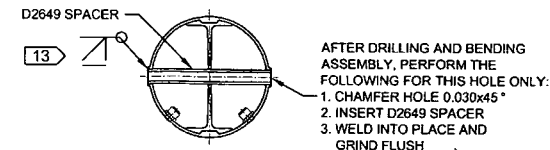
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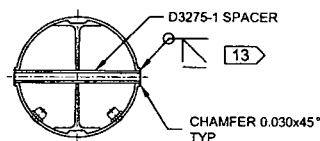
B7-2, B5-2, D1-3 **SECTION B-B**  
FOR Ø0.375 SADDLE HOLES ONLY  
8 PL, SCALE 5X



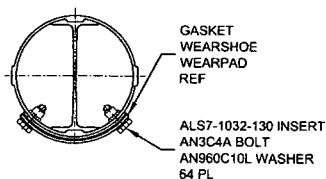
**SECTION J-J** D5-2, B6-2  
SCALE 5X



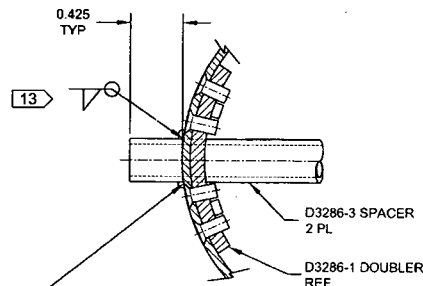
B5-2 **SECTION K-K**  
1 PL, SCALE 5X



**SECTION C-C** B7-2, B4-2  
FOR Ø0.313 HOLES ONLY  
6 PL, SCALE 5X



**SECTION D-D** B6-2  
FOR WEARSHOES INSTALL ONLY  
32 PL, SCALE 5X



- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
  2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
  3. ENLARGE HOLES IN D3286-1 TO Ø0.500
  4. ENLARGE HOLES IN TUBE TO Ø0.625
  5. RIVET D3286-1 TO TUBE
  6. INSERT D3286-3 SPACER
  7. WELD IN PLACE AND GRIND FLUSH

**SECTION H-H** D3-3  
NOT TO SCALE

RELEASED  
09/18/16

DESIGN	99	<b>DART AEROSPACE LTD</b>	
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MFG. APPR.	99	D3288	SHEET 4 OF 4
APPROVED	99	TITLE	SCALE
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



NO. 295

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 83028  
Part number: A206-642-241  
Description: Skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Alum.  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier [Signature] Date of Test Coupon 12.05.23  
Welder Barclay Elliott Date of Test Coupon 12.05.23

The above named individual is qualified in accordance with AWS D17.1.2001 to weld